

propagation and reintroduction, fire control, nonnative species removal, and ungulate fencing. Failure to implement these management measures, all of which require voluntary landowner support and participation, virtually assures the extinction of these species. Many of these types of conservation actions in these areas of Maui are carried out as part of TNCH's, the State's, ML&P's, and Ulupalakua and Haleakala Ranch's participation in landowner incentive-based programs, and by actions taken on the landowner's initiative, as well as by actions taken on the State's prioritization and initiative, and Ulupalakua Ranch's and Haleakala Ranch's participation with the Service's Partners for Fish and Wildlife. These activities, which are described in more detail above, require substantial voluntary cooperation by each entity and other cooperating landowners and local residents.

The following analysis describes the likely conservation benefits of a critical habitat designation compared to the conservation benefits without critical habitat designation. In particular we considered: to what extent a critical habitat designation would confer additional regulatory conservation benefits on these species; to what extent the designation would provide an educational benefit to the members of the public that would lead to enhanced conservation; and whether the critical habitat designation would have a positive, neutral, or negative impact on voluntary conservation efforts on each landowner's lands as well as other non-Federal lands on Maui that could contribute to recovery.

(1) Benefits of Inclusion

These areas contain habitat essential to the conservation of the species listed for each area as described above. The primary direct benefit of inclusion of these lands as critical habitat would result from the requirement under section 7 of the Act that Federal agencies consult with us to ensure that any proposed Federal actions do not destroy or adversely modify critical habitat.

The benefit of a critical habitat designation would ensure that any actions authorized, funded or carried out by a Federal agency would not likely destroy or adversely modify any critical habitat. Without critical habitat, some site-specific projects might not trigger consultation requirements under the Act in areas where species are not currently present; in contrast, Federal actions in areas occupied by listed species would still require consultation under section 7 of the Act to determine

if the action is likely to jeopardize the continued existence of the listed species.

Much of the area on TNCH's lands is already occupied habitat for 13 of the 16 listed species. Therefore, any Federal activities that may affect these areas will likely require section 7 jeopardy consultation. Historically, we have conducted only one informal consultation under section 7 regarding Federal actions on TNCH's land on Maui. This consultation was conducted with the U.S. Department of Agriculture to review the effect of feral pig removal on listed endangered and threatened species within Waikamoi and Kapunakea Preserves. Thirteen of the 60 species, *Alectryon macrococcus*, *Argyroxiphium sandwicense* ssp. *macrocephalum*, *Asplenium fragile* var. *insulare*, *Bonamia menziesii*, *Colubrina oppositifolia*, *Ctenitis squamigera*, *Cyanea lobata*, *Diplazium molokaiense*, *Geranium arboreum*, *Geranium multiflorum*, *Plantago princeps*, *Platanthera holochila*, and *Sanicula purpurea*, are known to occur within the preserves.

Much of the area on State lands is already occupied habitat for two of the three listed species. Therefore, any Federal activities that may affect these areas will likely require section 7 jeopardy consultation. Historically, we have conducted one formal consultation and 16 informal consultations under section 7 on the islands of Maui and Kahoolawe for one or more of the 60 plant species. None of these consultations involved this State land.

Much of the area in the ML&P's Puu Kukui WMA is already occupied by *Ctenitis squamigera*, *Clermontia oblongifolia* ssp. *mauiensis*, *Cyanea lobata*, *Cyrtandra munroi*, *Hesperomannia arborescens*, *Phlegmariurus mannii*, *Platanthera holochila*, and *Sanicula purpurea*. Therefore, any Federal activities that may affect these areas will in all likelihood require section 7 jeopardy consultation. Historically, we have conducted one informal consultation for this property. It addressed the beneficial effects of Federal funding for ungulate exclusion on listed endangered and threatened species within the Puu Kukui Partnership Project area.

On Maui, historically we have conducted only one formal consultation and 16 informal consultations under section 7 for any of the plant species found on Maui. Of these, only two informal consultations were conducted on Ulupalakua Ranch. These were intra-Service consultations on the effects of fencing and outplanting within the Puu Makua Partnership Project area and the

Auwahi Partnership Project area (see discussion below).

We have never completed a section 7 consultation on Haleakala Ranch Company's lands (although one is in the process of being completed for the Puu Pahu project that the Service is funding in part).

As a result of the low level of previous Federal activity on these lands, and after considering the future Federal activities that might occur on these lands, it is the Service's opinion that there is likely to be a low number of future Federal activities that would adversely affect habitat on the lands described above. Therefore, we anticipate little additional regulatory benefits from including these areas in critical habitat beyond what is already provided by the existing section 7 nexus for habitat areas occupied by the listed extant species.

Another possible benefit of designating critical habitat is that the designation can educate the public regarding the potential conservation value of an area, which may contribute to conservation efforts by other parties by clearly delineating areas of high conservation value for certain species. Information about the species for which suitable habitat was identified on these lands on Maui, including other parties engaged in conservation activities, could have a positive conservation benefit for the species.

While we believe this educational outcome is important for the conservation of these species, we believe it has already been achieved through the existing management, education, and public outreach efforts carried out by land owners and their conservation partners. The Nature Conservancy of Hawaii has a well-developed public outreach infrastructure that includes magazines, newsletters, and well-publicized public events on Maui and throughout Hawaii. The State has a well-developed public outreach infrastructure that includes websites, newsletters, and well-publicized public events on Maui and throughout Hawaii. ML&P features the Puu Kukui Watershed preserve on its Web site (http://www.maui.net/mauilnp/puu_kukui.html) and the Puu Kukui Watershed department staff hold monthly volunteer weed service trips throughout the year. An annual boardwalk hike (\$1,500/person) for a dozen people is held in August/September with one free "prize" slot reserved for the student winner of an environmental essay contest from Maui County high schools (Randy Bartlett, Watershed Management Supervisor, ML&P, in litt., 2002). Through the